

## The Knowledge Bank at The Ohio State University

### Ohio State Engineer

**Title:** Dean MacQuigg Receives Morehead Medal

**Issue Date:** 1944-03

**Publisher:** Ohio State University, College of Engineering

**Citation:** Ohio State Engineer, vol. 27, no. 4 (March, 1944), 13, 22.

**URI:** <http://hdl.handle.net/1811/36052>

# Dean MacQuigg Receives Morehead Medal

CHARLES ELLISON MACQUIGG, Dean of Engineering at Ohio State University, was given the James Turner Morehead Medal of the International Acetylene Association at a dinner in his honor Monday, January 24, at the Union League Club, New York, for "advancing the oxy-acetylene processes through metallurgical research, and for leadership in welding engineering education."

The Morehead Medal is awarded annually by the International Acetylene Association in recognition of outstanding work in the acetylene industry or for advancement in the production or use of calcium carbide. The medal is awarded in honor of the late James Turner Morehead, who sponsored the experiments which led to the discovery of the modern electric-furnace method of producing calcium carbide, from which the acetylene industry has sprung.

In addition to his duties as Dean of Engineering, Dean MacQuigg is also Head of the Engineering Experiment Station, member of the War Metallurgy Committee of the National Academy of Sciences; chairman of the Executive Committee of the Society for the Promotion of Engineering Education; Regional Director of the War Manpower Commission, Engineering Science and Management War Training Division; and director and chairman of the Executive Committee of the Orton Foundation.

During over thirty years in numerous types of metallurgical activities, Dean MacQuigg has had a part in extensive research and development work on welds and materials for welding. He was long the guiding force of the Tests and Specifications Committee of the Compressed Gas Manufacturers Association in the testing and development of cylinders for transportation of oxygen, acetylene, and other

compressed gases. Pioneer work under his direction, specifically in developing high-strength steel, bronze, and stainless steel rods for oxy-acetylene welding, has served as a foundation for many recent researches in this field.

In engineering education, Dean MacQuigg holds an equally prominent place. Shortly after accepting his present position, he was instrumental in developing and establishing here the first, and still the only, complete four-year curriculum in welding engineering, leading to a baccalaureate degree in this subject. The success of this program has been followed by a growing interest and the later encouragement and establishment of many courses in welding engineering at other universities.

*(Continued on page 22)*



### **MacQUIGG HONORED**

*(Continued from page 13)*

Prior to his appointment as Dean in 1938, Mr. MacQuigg was manager of Union Carbide and Carbon Research Laboratories. Before beginning his services with that corporation in 1919, he was for five years head of the Department of Metallurgy at Pennsylvania State College.

Dean MacQuigg is a member of Tau Beta Pi, honorary engineering fraternity and of Sigma Xi, honorary scientific fraternity, as well as of the American Society for Testing Materials, American Society for Metals, American Society of Mechanical Engineers, American Institute of Mining and Metallurgical Engineers, American Iron and Steel Institute, Compressed Gas Manufacturers Association, American Welding Society, Army Ordnance Association, Association of Land Grant Colleges and Universities, and Newcomen Society.

# Tough problems in Engineering ... licked in record time



**New Radio—with 80 voices—  
revolutionized our tank warfare**

**I**N 1940 the Signal Corps brought one of its toughest radio assignments to Bell Telephone Laboratories and Western Electric.

A rugged multi-frequency set was wanted for the armored forces. It must be, in effect, a radio switchboard to interconnect tanks, scout cars, command cars, artillery units, anti-tank vehicles.

The model was ready in one quarter of the time normally required to design and build such a complex set—an FM transmitter and receiver having 80 crystal controlled frequencies. Any 10 crystals could be quickly plugged in—and push buttons provided instant switching from one channel to another. The set was tested—accepted—ordered in quantity.

Meanwhile Western Electric engineers were tackling knotty production problems—tooling up of plant, training girls for the exacting work, procuring raw materials, setting up complex testing procedures.

Among the toughest problems were those of crystal

manufacture. Millions of these tiny quartz wafers would be needed—each lapped to dimensions, silver plated in a vacuum, and mounted on wires so small that they must be soldered in place under a microscope. Amazing new machines and methods were devised—and the crystals came out on time.

Radio, electrical, mechanical and industrial engineers at Western Electric—Bell Laboratories men and Signal Corps men—all contributed invaluable aid. Early production goals were met—volume increased steadily.

Today huge numbers of units have been delivered. They are providing the instant communications that enable our armored forces to travel farther and faster and to hit harder!

*Buy War Bonds regularly — all you can!*



75<sup>TH</sup> ANNIVERSARY

**Western Electric**

IN PEACE...SOURCE OF SUPPLY FOR THE BELL SYSTEM.  
IN WAR... ARSENAL OF COMMUNICATIONS EQUIPMENT.

